

Governor Kempthorne: state must deal with its "energy and water challenges"

Water conservation makes sense for Idaho's systems

In a late February press release, Governor Dirk Kempthorne stated "that high wholesale power prices and low snow-pack and reservoir levels have set the stage for an energy and water supply shortage in Idaho." Kempthorne urged businesses and consumers to take conservation steps "to deal with the energy and water challenges we face here in Idaho."

This special issue of the **Idaho Drinking Water Newsletter** offers suggestions to public water systems about conserving water and energy. Water conservation measures make environmental and financial sense. Conserving water not only helps save Idaho's water resources but also can reduce operating costs, decrease energy use, and help extend the life of your water supply facilities.

Water utilities should encourage residents to voluntarily conserve water and explain that excessive use of water indoors and outdoors can jeopardize drinking water supplies. (See insert "Water Conservation Tips for Residents" for suggestions. The insert can be copied and used as a handout.)

If the level of demand is inflated by wasteful use, people pay more in both capital and operating costs than is necessary to provide safe and adequate water supply and wastewater services. Moreover, when the cost of supplying drinking water and processing wastewater is reduced, your system's financial resources can be used to meet other needs.

As a public water system, you may want to consider these recommendations regarding water conservation. For systems serving 10,000 or fewer people, DEQ suggests **metering, water accounting and loss prevention, water rates based on cost of service, and public education and information.**

Metering. The American Water Works Association (AWWA) recommends that every water utility meter all water taken into its system and water distributed from its system to its users. Metering is one of the most important parts of water conservation. In fact, unless a utility is 100 percent metered, it is difficult to enforce any conservation program. According to a U. S. Housing and Urban Development document, metered customers use an average of 13-45 percent less water than unmetered customers because they know they must pay for any misuse or negligence.

Leakage Can Be Costly

Leak This Size	Water Loss in Gallons		Annual Loss in Dollars @ \$5.00 per 1000 Gal. Rate
	Per Day	Per Month	
•	185	5,550	333
•	735	22,050	1,323
•	1,655	49,650	2,979
•	2,945	88,350	5,301
•	6,620	198,600	11,916
•	11,770	353,100	21,186
•	18,395	551,850	33,111
•	26,485	794,550	47,673
•	36,050	1,081,500	64,890
•	47,090	1,412,700	84,762
			Source: Drapar Aden Associates

Leakage estimates based on 50psi pressure

Metering can also help in managing the overall water system since it can help to

- ☐ locate service line leaks by identifying blocks of water that are not being charged to any customers,
- ☐ Identify high-use customers, who can be given literature on opportunities for conserving,

continued

Water Conservation, continued

- Identify areas where use is increasing, which is helpful in planning additions to the distribution system.

Water Accounting and Loss Prevention. Water that is lost through leakages and other means produces no revenues for your water system. DEQ recommends that all water systems implement a basic method of water accounting. Water accounting is less accurate when a system lacks source and connection metering, but there are ways that unmetered source water can be estimated.

Old and poorly constructed pipelines, inadequate corrosion protection, poorly maintained valves and mechanical damage are major factors contributing to leaks. In addition to loss of water, water leaks reduce pressure in the supply system. Raising the pressure to compensate for such losses only increases energy consumption and can make leaking worse.

Systems should consider instituting a loss-prevention program, which may include pipe inspection, cleaning, lining, and other maintenance efforts, to improve the distribution system and prevent leaks and ruptures.

Water Rates Based on Cost of Service. Water rates should reflect the real cost of water. Most water rates are only based on a portion of what it costs to obtain, develop, transport, treat, and deliver water to the consumer. DEQ suggests that systems consider whether their current rate structures actually promote excessive water usage rather than conservation. Only when rates include all costs can water users understand the real cost of water service and consequently, the need to conserve.

An added bonus to an information and education program is that consumers are much more supportive of a utility if they know how it operates. Public acceptance of

necessary rate increases is often enhanced if customers understand the needs of the water system and the costs involved in protecting public health.

Public Education and Information. The AWWA recommends that water systems have a public information and education program to promote water conservation. Systems can include inserts in their customers' water bills that provide information on water use and costs or tips for home water conservation, such as repairing leaky faucets and installing low-flow showerheads. ■

Environmental workshops for small northwest communities

The Northwest Small Cities Services, sponsored by the Idaho DEQ, U.S. EPA, the Association of Idaho Cities, and the Idaho Rural Water Association, is providing "*Environmental Workshops for Small Northwest Communities*" in March in Idaho.

The *free* workshops, aimed at small communities and special districts, will enhance the ability of participants "to address water, wastewater, and other environmental problems and to meet public health and environmental requirements."

The Idaho locations for the one-day, 9:00am-4:00pm workshops are **St. Maries**, March 26; **Blackfoot**, March 28; and **Glenns Ferry**, March 30. Required logistical information and registration must be completed on-line through the "Workshops" tab at <http://nwscs.org>.

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Water Conservation Tips for Residents

Kitchen and Laundry:

- ☐ Keep drinking water in the refrigerator instead of letting the faucet run until the water is cool.
- ☐ Wash fruits and vegetables in a basin. Use a vegetable brush.
- ☐ Do not use water to defrost frozen foods, thaw in the refrigerator overnight.
- ☐ If washing dishes by hand, use a dishpan for rinsing dishes.
- ☐ Scrape, rather than rinse, dishes before loading into the dishwasher.
- ☐ Operate the dishwasher only when completely full.
- ☐ Add food wastes to your compost pile instead of using the garbage disposal.
- ☐ Use the appropriate water level or load size selection on the washing machine.

Bathrooms:

- ☐ Never use your toilet as a wastebasket.
- ☐ Do not let the water run while shaving or brushing teeth.
- ☐ Take short showers instead of tub baths. Turn off the water flow while soaping or shampooing.
- ☐ If you use a tub, fill the tub only half full.
- ☐ Never pour water down the drain when there may be another use for it - such as watering plants or a garden.

Outside:

- ☐ Sweep driveways, sidewalks, and steps rather than hosing off.
- ☐ Wash the car with water from a bucket, or consider using a commercial carwash that recycles water.
- ☐ When using a hose, control the flow with an automatic shut-off nozzle.
- ☐ Avoid purchasing recreational water toys that require a constant stream of water.
- ☐ If you have a swimming pool, consider a new water-saving pool filter.
- ☐ Lower pool water level to reduce amount of water splashed out.
- ☐ Use a pool cover to reduce evaporation when pool is not being used.

Equipment:

- ☐ Repair all leaks. A leaky toilet can waste 200 gallons per day. To detect leaks in the toilet, add food coloring to the tank water. If the colored water appears in the bowl, the toilet is leaking.
- ☐ Install ultra-low flow toilets, or place a plastic container filled with water or gravel in the tank of your conventional toilet. Be sure it does not interfere with operation of the toilet's flush mechanisms.
- ☐ Install low-flow aerators and showerheads.
- ☐ Consider purchasing a high efficiency washing machine that can save over 50% in water and energy use.